

# West Michigan Transportation Operations Center

Serving Motorists on West Michigan Freeways

[www.michigan.gov/its](http://www.michigan.gov/its)

[www.michigan.gov/drive](http://www.michigan.gov/drive)

Fiscal Year 2010



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**West Michigan TOC Control Room**  
E-mail: [MDOT-GR-TRAFFOPS@michigan.gov](mailto:MDOT-GR-TRAFFOPS@michigan.gov)  
Main: 616-451-8329  
Fax: 616-774-9101

## In the Spotlight



The number of crashes recorded by WMTOC control room operators increased by about 50 percent, from approximately 270 crashes in FY 2009 to approximately 400 crashes in FY 2010. The majority of the crashes occurred on US-131, which has the greatest amount of camera coverage as well as the highest traffic volumes in the Grand Rapids area.

Control room operators have diligently used the freeway surveillance cameras, as well as radio and television traffic reports, to assist with as many crashes as possible. Michigan State Police (MSP) dispatchers also monitor the CCTV cameras using the State of Michigan intranet. In FY 2010, through discussions with MSP dispatchers, control room operators discovered that the WMTOC could provide larger camera views to MSP by changing a setting in the CCTV software. The improved camera views promote enhanced communication between MSP dispatchers and troopers, which also provides WMTOC operators with better information regarding traffic incidents.

Phone calls in and out of the WMTOC control room increased significantly in FY 2010 from approximately 800 total calls in FY 2009 to more than 2,500 calls. The increased number of crashes and phone calls are likely related to each other, since the highest number of calls was attributed to MDOT's primary incident response partners (Grand Rapids Police and Fire Dispatch and Michigan State Police). The number of e-mail communications stayed approximately the same between FY 2009 and FY 2010.

Compiled by:  
**URS**

## Control Room Hours of Operation

Time Period	Days	Hours
October – April	Monday – Friday	6 a.m. – 8 p.m.
	Saturday – Sunday	As needed
May – September	Monday – Thursday	6 a.m. – 8 p.m.
	Friday	6 a.m. – 9 p.m.
	Saturday	Noon – 6 p.m.
	Sunday	4 – 8 p.m.
Special Events	All	As needed
Holidays and Holiday Weekends	New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas	As needed

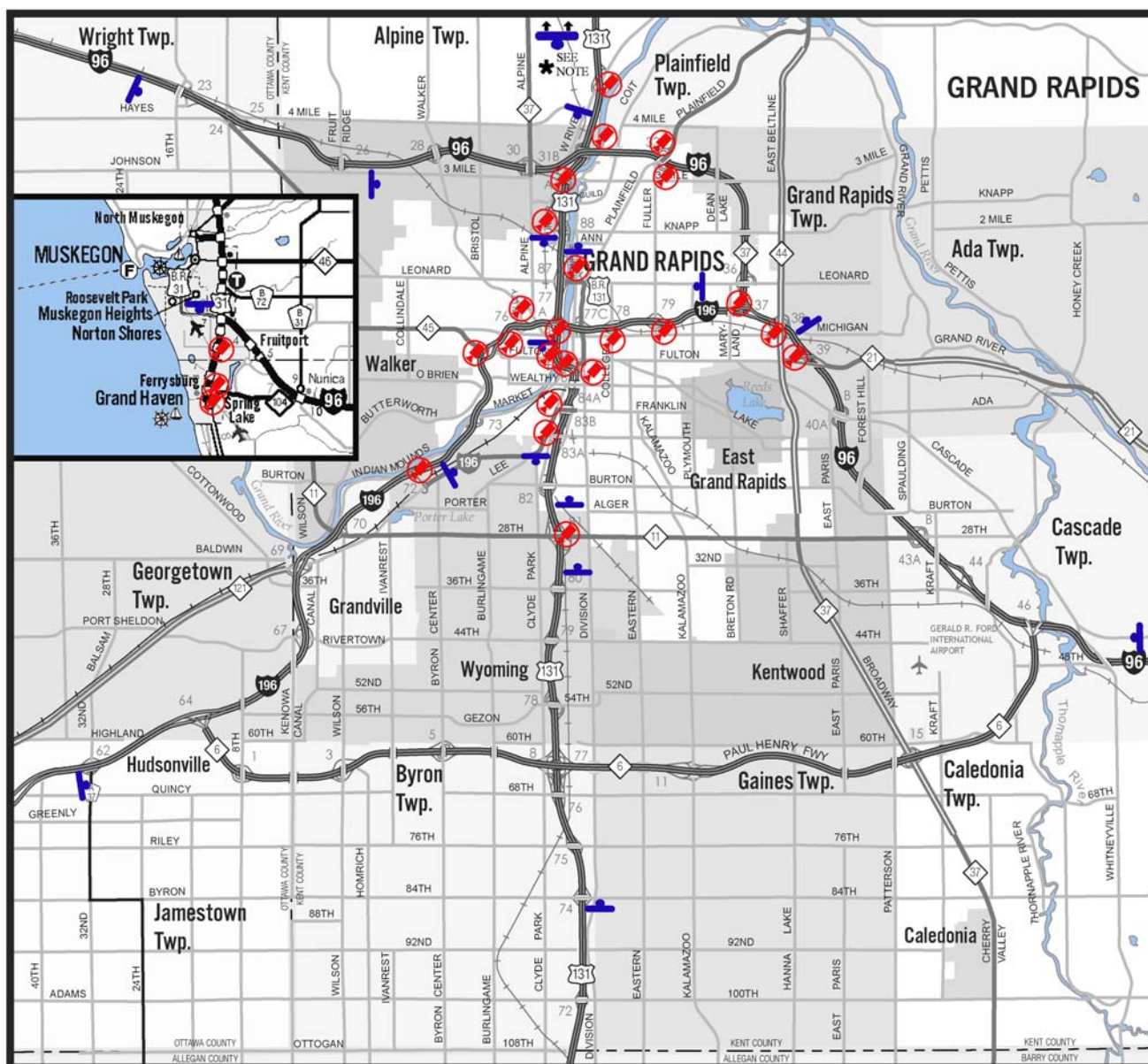
## Control Room Contact Information

E-mail: MDOT-GR-TRAFFOPS@michigan.gov  
Main: 616-451-8329  
Fax: 616-774-9101

### PLEASE NOTE:

The following report is limited to data collected within the ITS device coverage area during control room operation hours.

## ITS Device Locations and Coverage Area



\* DMS on South US-131 at Rockford Rest Area

**Key:** Closed-circuit Television Camera  
 Dynamic Message Sign

# Summary

## Data Key

FY 2010

### Communications Activity



Operators log all incoming and outgoing control room communications, engaging various incident responders and stakeholders.

#### Total Communication

Calls: 2,561

E-mails: 1,686

### Quality Assurance/Quality Control



Quality assurance and quality control audit of format and content for incident notification communication and media traffic reporting.

#### Incident Notification

Format Correct 97.5%

Content Correct 94.1%

### Unplanned Incidents



Operators log information about each unplanned incident\* including date/time, location, traffic impact, duration, and associated traveler information.

#### Total Incidents

1,094

### Construction Activity



Operators maintain a list of ongoing construction projects and contacts for these projects. This activity also includes maintenance operations.

#### Incidents Occurring in Construction Zones

22

### Daily Shift Report



Operators track maintenance issues for all Intelligent Transportation Systems (ITS) equipment, including Closed-circuit Television (CCTV) cameras, Microwave Vehicle Detector Systems (MVDS), Dynamic Message Signs (DMS), and Variable Speed Signs (VSS).

#### System Availability

CCTV: 92%

MVDS: 84%

DMS: 88%

VSS: 98%

\***Incidents** include, but are not limited to, vehicle crashes, abandoned or disabled vehicles, and debris in the roadway.

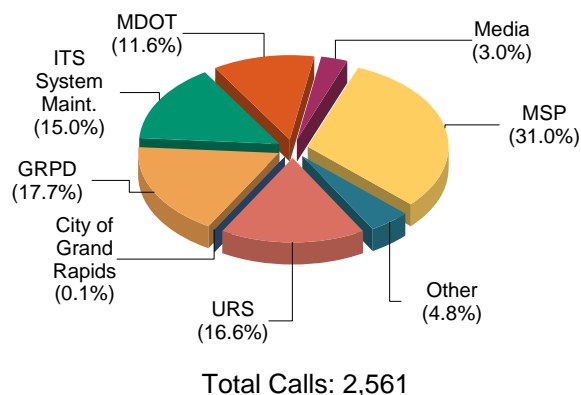


## Communications by Agency

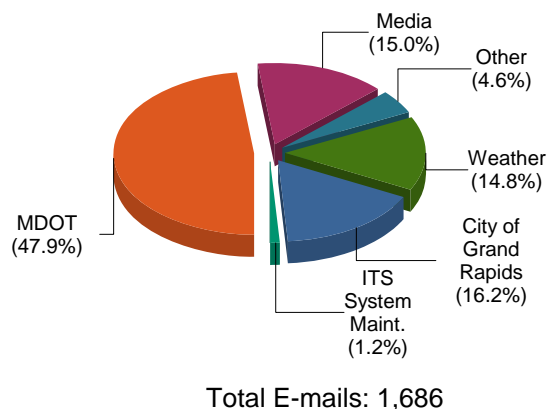


Agency	Calls			E-mails		
	In	Out	Total	In	Out	Total
City of Grand Rapids	2	1	3	274	0	274
Grand Rapids Police Department	55	400	455	0	0	0
ITS System Maintenance	215	170	385	17	4	21
Kent County Road Commission	9	30	39	0	0	0
Kent County Sheriff	0	0	0	0	0	0
MDOT, Construction	92	81	173	466	9	475
MDOT, Maintenance	11	27	38	174	3	177
MDOT, Other	38	20	58	26	4	30
MDOT, Traffic/ITS	23	6	29	101	26	127
Media	52	26	78	23	231	254
Michigan State Police	111	683	794	0	0	0
Other	50	34	84	58	20	78
URS Corporation	248	177	425	0	0	0
Weather	0	0	0	250	0	250
<b>Annual Total</b>	<b>906</b>	<b>1,655</b>	<b>2,561</b>	<b>1,389</b>	<b>297</b>	<b>1,686</b>

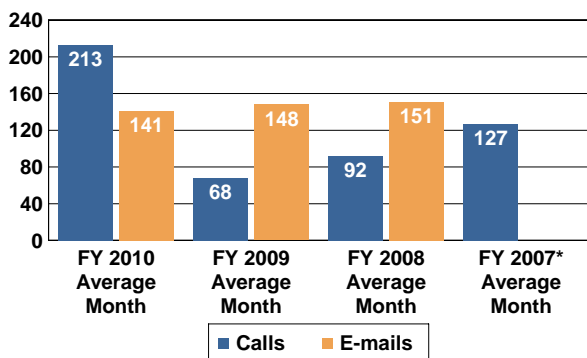
## Calls by Type



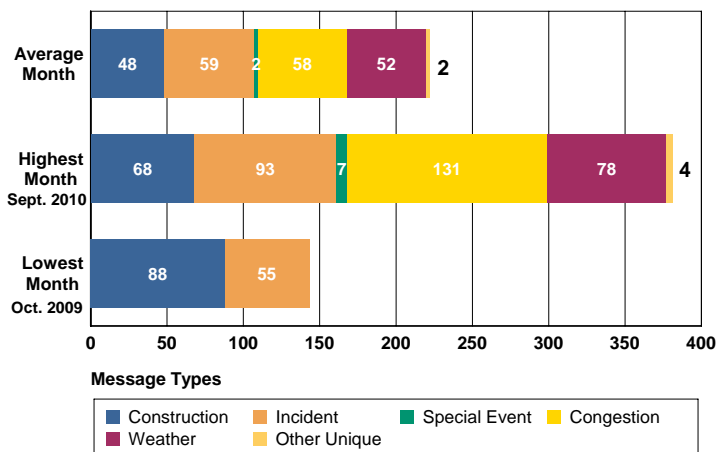
## E-mails by Type



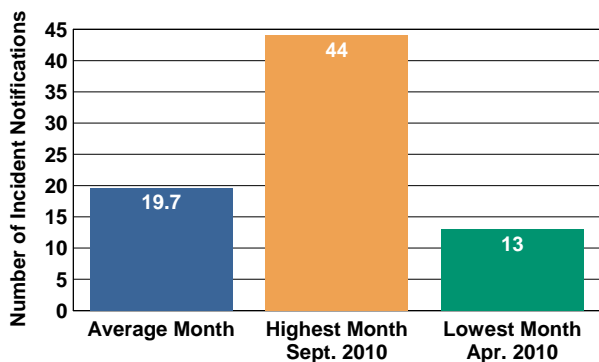
## Annual Average Communication History



## DMS and VSS Messages by Type



## Incident Notification\* History



## Incident Notification\* Communication Accuracy



	FY 2010 Average	FY 2009 Average
Format Correct	97.5%	96.1%
Content Correct	94.1%	93.4%

\*Incident Notification e-mails are issued for high-impact incidents with an expected duration of 15 minutes or greater. To subscribe to this list, please send an e-mail to [MDOT-GR-TRAFFOPS@michigan.gov](mailto:MDOT-GR-TRAFFOPS@michigan.gov).

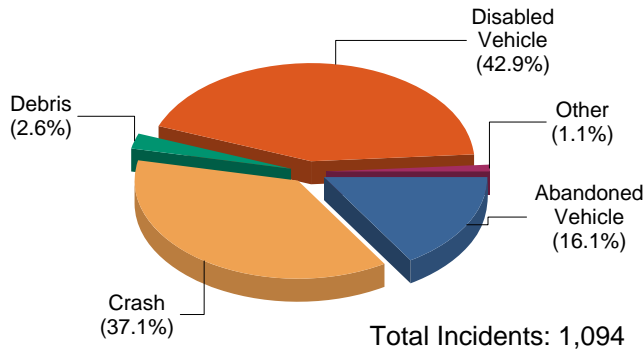
## Most Utilized DMS\*



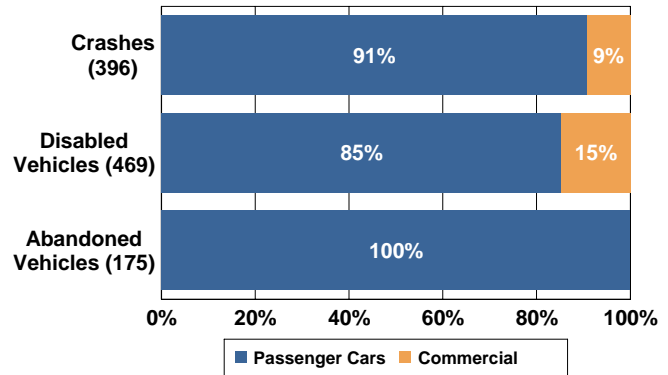
1. US-131 NB @ 28th St. (369)
2. US-131 NB @ 36th St. (260)
3. I-196 EB @ Chicago Dr. (217)

\*Number of unique event messages.

## Incident Managed by Type

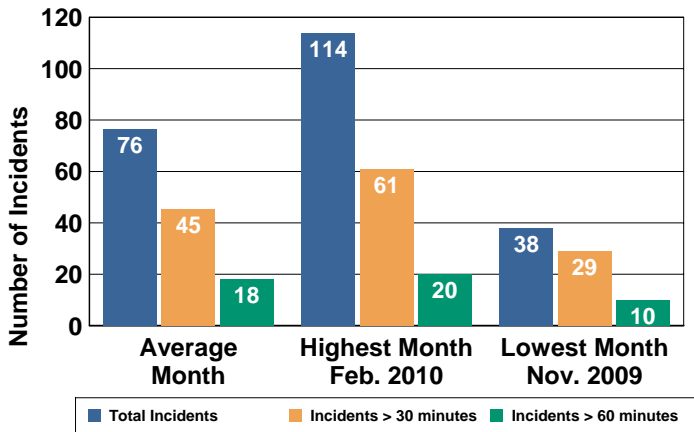


## Vehicle Composition of Incidents\*



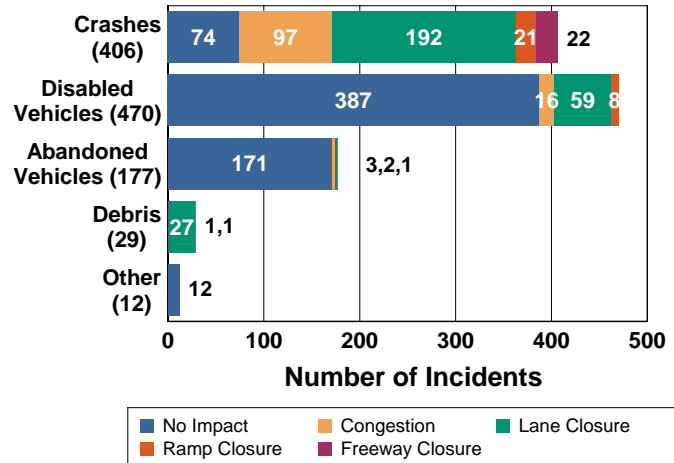
\*Vehicle Composition of Incidents excludes incidents where vehicle types were not identified.

## Incident Duration History\*

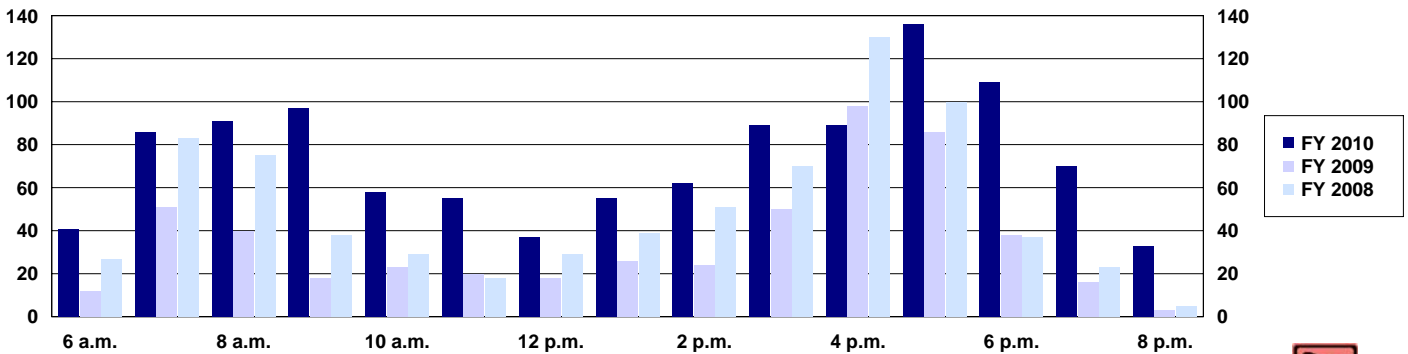


\*Incident Duration History excludes abandoned vehicles.

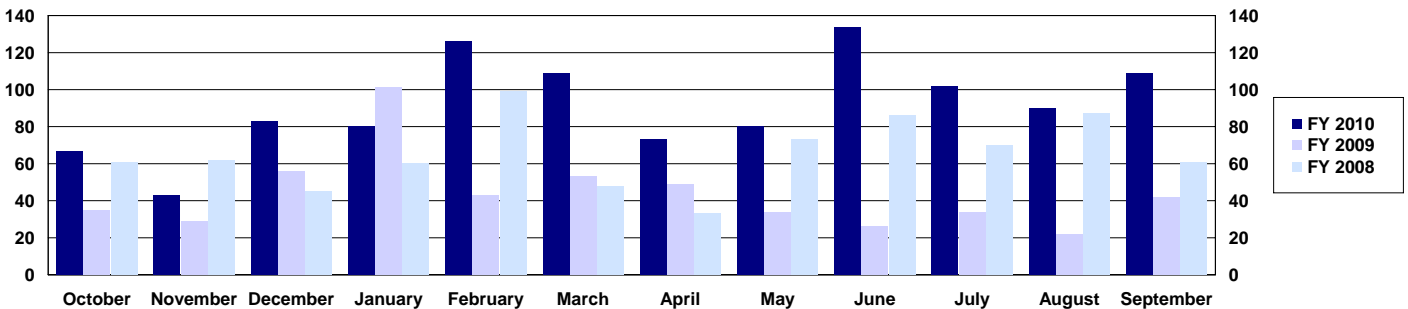
## Traffic Impacts by Type



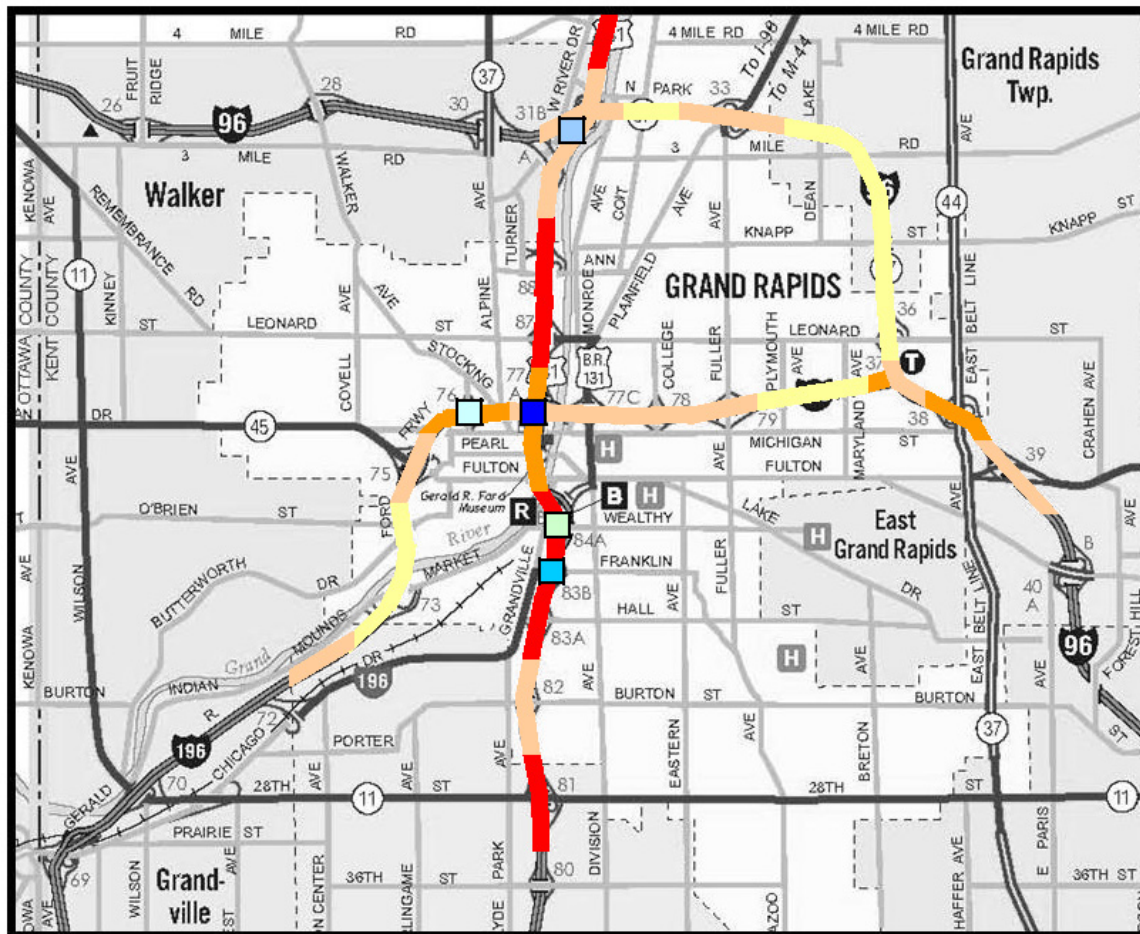
## Total Unplanned Incidents per Weekday Hour



## Total Unplanned Incidents per Month



## Incident Density and Hot Spots Map



**Segments:** 0 - 19 20 - 39 40 - 59 > 60 (incidents/mile)

**Hot Spots:** 32 31 27 25 22 (crashes)

## High-impact Unplanned Incident Activity\*



Incident	FY 2010			FY 2009		
	Average Month	Highest Month Sep. 2010	Lowest Month Apr. 2010	Average Month	Highest Month Jan. 2009	Lowest Month Nov. 2008
Lane Closure	23.3	43	13	15.3	41	8
Ramp Closure	2.6	4	1	0.2	0	0
Freeway Closure	1.8	2	2	0.8	2	0

\*High-impact Unplanned Incident Activity includes unplanned incidents resulting in closures.

## Unplanned Incidents by Roadway

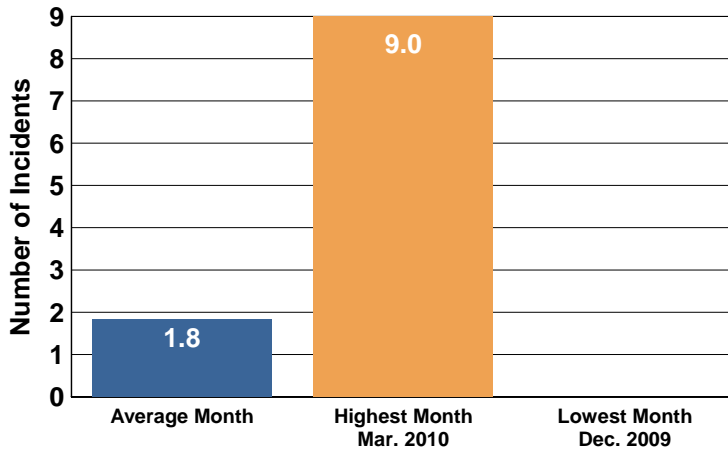


Freeway	FY 2010						FY 2009					
	Average Month		Highest Month June 2010		Lowest Month Nov. 2009		Average Month		Highest Month Jan. 2009		Lowest Month Aug. 2009	
	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.
I-96 (4.5 mi.)*	13	3.0	16	3.6	6	1.3	5	1.2	15	3.3	4	0.9
I-196 (8.5 mi.)*	18	2.1	13	1.5	12	1.4	13	1.6	31	3.6	7	0.8
US-131 (11 mi.)*	58	5.3	103	9.4	23	2.1	25	2.2	51	4.6	11	1.0
<b>Total</b>	<b>89</b>	<b>3.7</b>	<b>132</b>	<b>5.5</b>	<b>41</b>	<b>1.7</b>	<b>43</b>	<b>1.8</b>	<b>97</b>	<b>4.0</b>	<b>22</b>	<b>0.9</b>

\* Reflects roadway mileage within the current WMTMC camera coverage area.



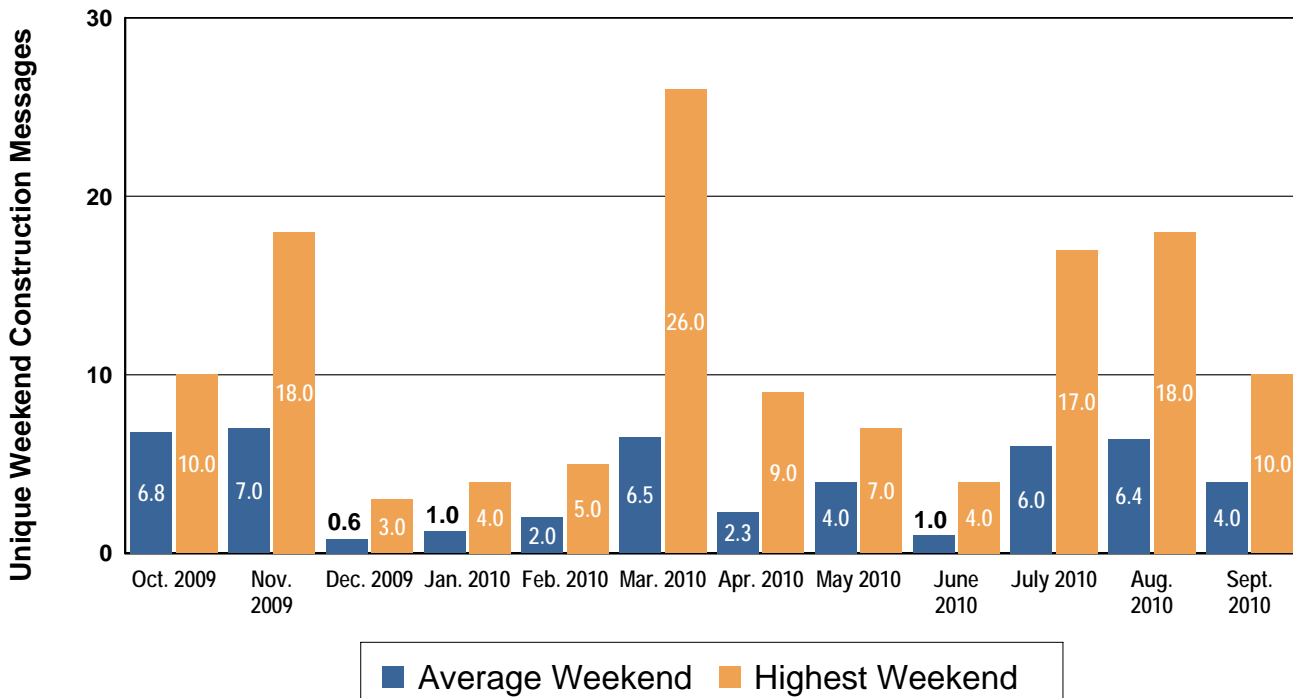
## Incidents Occurring in Work Zones



### Highest Month Work Zone Incident Details:

During the month of March, there were six crashes, two abandoned vehicles and one disabled vehicle that were identified by operators within "The Fix on I-196" work zone. All nine events occurred on eastbound I-196 between Ottawa Avenue and College Avenue.

## Weekend\* Construction DMS Message Activity

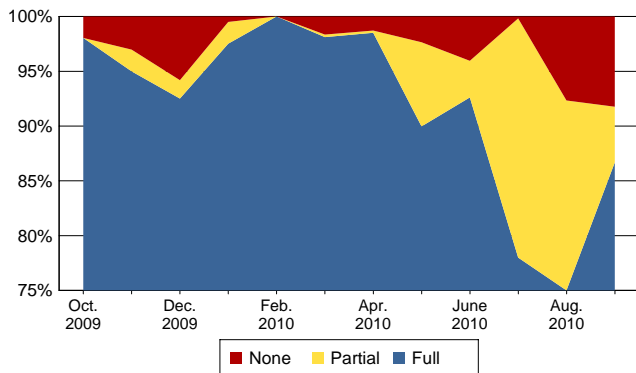


\* Friday, Saturday and Sunday.

Construction Activity



## Overall CCTV Camera Availability

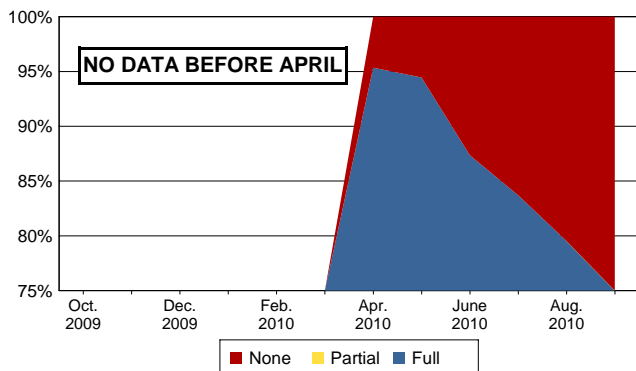


## Individual CCTV Camera Availability



CCTV Cameras Below 98% Availability			
Location	Full	Partial	None
1. I-96 Conn. to US-131	62%	15%	22%
2. US-131 @ Wealthy St.	74%	23%	3%
3. I-96 EB @ Plainfield Ave.	75%	13%	12%
4. I-196 @ Lake Michigan Dr.	80%	20%	-
5. I-196 @ Lane Ave.	82%	18%	-
6. I-196 @ Chicago Dr.	82%	18%	-
7. I-96 @ M-21 (Fulton St.)	86%	-	14%
8. I-96 WB @ Plainfield Ave.	89%	1%	9%
9. US-131 @ Leonard St.	92%	8%	-
10. I-96 @ E. Beltline Ave.	96%	-	4%

## Overall MVDS Availability

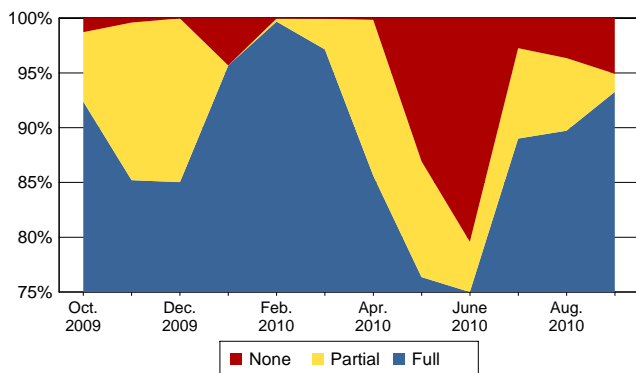


## Individual Detector Availability



MVDS Below 90% Availability			
Location	Full	Partial	None
1. DS 119	1%	-	99%
2. DS 116	1%	-	99%
3. DS 115	25%	-	75%
4. DS 114S	41%	-	59%
5. DS 114N	41%	-	59%
6. DS 125	43%	-	57%
7. DS 126	45%	-	55%
8. DS 124	78%	-	22%
9. DS 105	78%	-	22%
10. DS 205	79%	-	21%
11. DS 123	79%	-	21%
12. DS 120	79%	-	21%
13. DS 109	83%	-	17%

## Overall DMS Availability

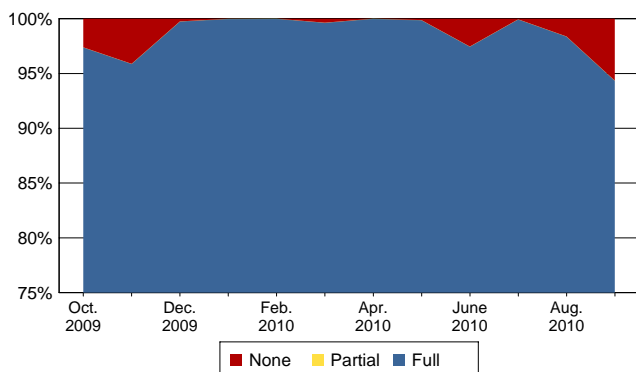


## Individual DMS Availability



DMS Below 98% Availability			
Location	Full	Partial	None
1. US-131 NB @ 28th St.	63%	35%	2%
2. I-196 EB @ 32nd Ave.	72%	-	28%
3. I-96 WB @ Quiggle Ave.	74%	-	26%
4. US-131 NB @ 84th St.	77%	-	23%
5. I-196 EB @ Chicago Dr.	80%	17%	3%
6. I-96 EB @ Marne	83%	1%	17%
7. I-96 WB @ M-21 (Fulton St.)	83%	16%	1%
8. US-131 NB @ Leonard St.	84%	14%	1%
9. US-131 SB @ Ann St.	90%	2%	7%
10. US-131 NB @ 36th St.	91%	4%	5%
11. I-196 WB @ Plymouth Ave.	92%	8%	-
12. US-131 SB @ Rest Area	94%	1%	5%
13. US-131 SB @ West River Dr.	97%	1%	2%

## Overall VSS Availability



## Individual VSS Availability



VSS Below 98% Availability			
Location	Full	Partial	None
1. Ionia NB Speed Limit	98%	-	2%

